

Project Factsheet for: Comprehensive Flood Impact-Response Modeling System - CFIRMS

Date Last Updated: 2006-09-12 12:26:45.0

Project Location Information

Location: Iowa River; Coralville Reservoir; Iowa City

State(s): IA

Congressional District(s): IA-2

Status

This demonstration project was initiated in Fiscal Year (FY) 1997 in coordination with the University of Iowa to develop a Comprehensive Flood Impact-Response Modeling System (CFIRMS). The effort focuses on the development of a prototype data-warehouse for Coralville Reservoir. There is no additional commitment by Headquarters, U.S. Army Corps of Engineers (HQUSACE), to allocate follow-on funds from Research and Development (R&D) funds. The Iowa Institute of Hydraulic Research of the University of Iowa has established a preliminary database warehouse that is accessible through the internet. Significant additional effort is necessary to develop the warehouse into a practical, real-time tool able to provide a fair evaluation of this enhanced model approach. The Water Resources Development Act of 1999 (WRDA 99) directs the Secretary of the Army to conduct the study and authorizes \$3 million for the effort. Implementation guidance from HQUSACE regarding the appropriate method for addressing project out-year budgeting (R&D or reconnaissance/feasibility, cost-shared or 100 percent Federal, new-start or continuing status) has not been received.

Description

As part of an effort to develop an effective CFIRMS, it is necessary to develop a data warehousing system and structure that will enable high speed access to both static and dynamic data sets involving such diverse data streams as digital terrain data, soils, geology, soil moisture, runoff, rainfall, land values, reservoir and channel water levels, flood routing, crop values, urban landscape mapping, archeological data bases, and critical facilities and capacities. The issue of data registry, dynamic data input and retrieval, security, high-speed access to on-line data, and data-sharing protocols (both operational and administrative) must first be addressed. An integrated solution for this data warehouse on a regional or watershed basis is needed. The CFIRMS will provide real-time, on-line database of hydraulic, physical, and economic data. This will provide valuable benefits in determining flood impact responses for an entire watershed system. The CFIRMS will serve as a model for flood control projects throughout the Nation.

Summarized Financial Data

Federal Cost	\$3,000,000
Non-Federal Cost	\$0
Total Cost	\$3,000,000
Federal Allocations through FY 2006	\$350,000
Scheduled Federal Allocation for FY 2007	\$0
Balance to Complete	\$2,650,000

Major Work Item (This Fiscal Year)

None

Major Work Item (Next Fiscal Year)

None

Authority

SI - Special Interest --

Additional Information

The FY 1996 and FY 1997 Energy and Water Development Appropriations Acts contained report language. The Senate Report in FY 1996 directed the Corps to evaluate the need for enhanced models within available R&D funding. The FY 1997 House Report stated that the Corps should consider participating in a CFIRMS. Additionally, the Senate version of WRDA 98 (S.2131, sec. 147) proposed specific authorization of a CFIRMS project with a report to Congress stating the results of the study. Based on the appropriation language, HQUSACE directed that the Rock Island District proceed in coordination with the Iowa Institute of Hydraulic Research to develop a CFIRMS. The Iowa Institute of Hydraulic Research of the University of Iowa was specifically designated as the source for development of a CFIRMS, since it had initiated the development and had the necessary resources, specifically the specialized academics and supercomputers already committed to this project. The project was authorized in WRDA in the amount of \$3 million.

Project Manager Information

Name: Marvin Martens, Hydrologic Engineering Section, Hydrology and Hydraulics Branch, Engineering Division

Phone: (309)794-5222

E-mail: Marvin.R.Martens@usace.army.mil